



Type 1510 Side-Mount Electric Level Switch

General Instructions

The SOR Type 1510 Electric Level Switch mounts into the side of a vessel. Electric switching action is provided by the float moving a magnet into the field of a hermetically sealed reed switch capsule.

The unit may be mounted for either high or low liquid level alarm by rotating the switch body to the proper position. The body wrench flats provide for ease of rotation and proper positioning. See decal on housing.



Before Installation of the Level Switch:

- Inspect the unit for any shipment damage.
- Check for mechanical clearance of the float. Float must move freely without binding throughout its stroke.
- Use an acceptable thread compound when installing unit to ensure a leak-free fit and to avoid thread galling.
- To achieve required function, install the unit according to the nameplate instructions shown here.

NOTE: If you suspect that a product is defective, contact the factory or the SOR® Representative in your area for a return authorization number (RMA). This product should only be installed by trained and competent personnel.



Nameplate Position for Low Level Alarm



Nameplate Position for High Level Alarm



NC - indicates circuit is closed

Design and specifications are subject to change without notice.

For latest revision, go to www.sorinc.com

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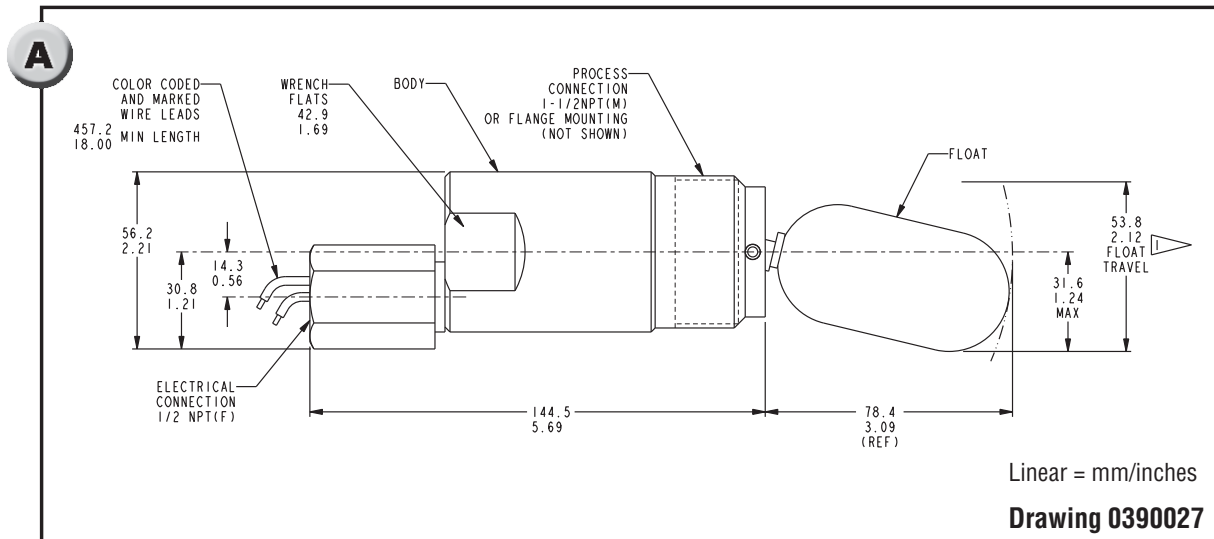
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Installation

The unit may be mounted in any of the following installation arrangements:

- 1-1/2" NPT half coupling (No full coupling).
- 2" NPT full coupling. (Use in conjunction with 2 x 1-1/2" NPT bushing as required.)
- 2" NPT pipe tee. (Use in conjunction with 2 x 1-1/2" NPT bushing as required.)
- Optional flanged mounting.
- Optional chamber mounting.

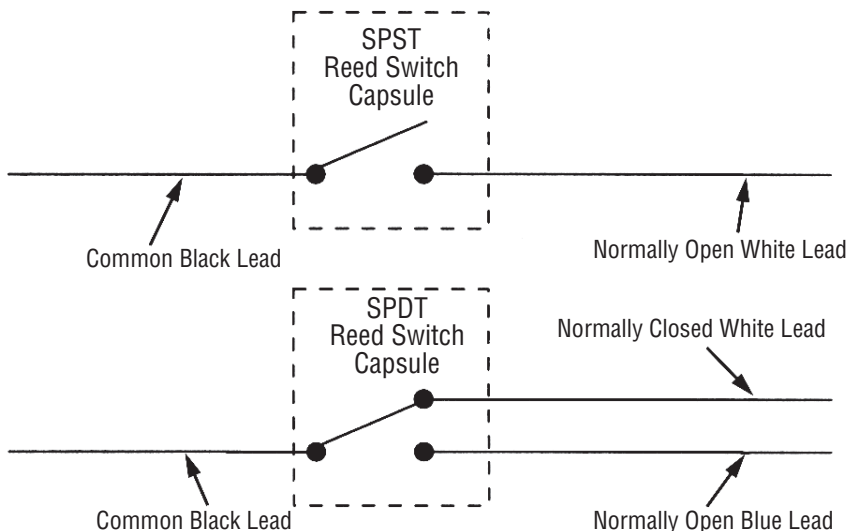
Dimensions are for reference only. Contact the factory for certified drawings for a particular model number.



Electrical Connection

Ensure that the wiring conforms to all applicable local and national electrical codes and install unit(s) according to relevant national and local safety codes.

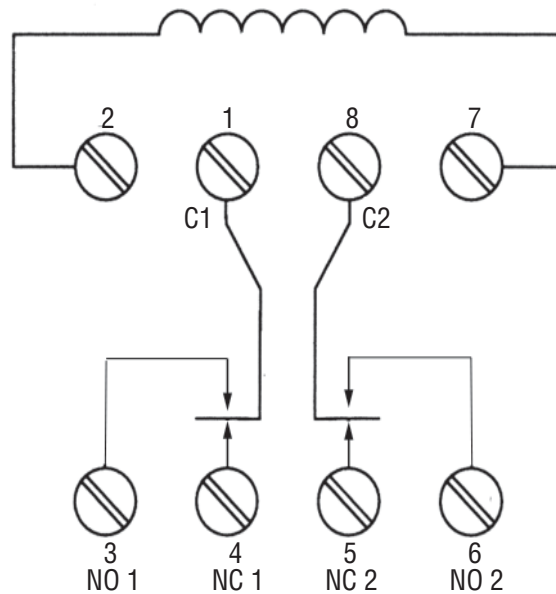
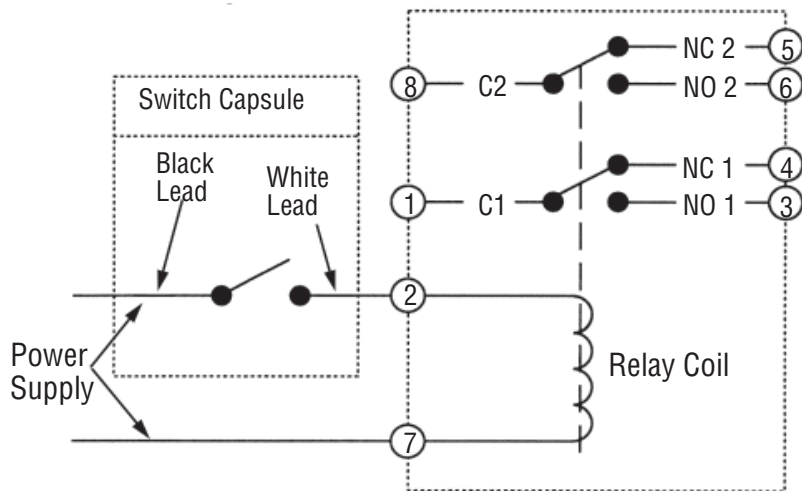
Electrical connection is free wire leads with a 1/2" NPT(F) conduit connection. Use two wrenches — one to hold the hex conduit connection, the other to tighten conduit fitting. Switching element is a hermetically sealed reed switch.



Do not exceed 1 amp @ 110 VAC or 3 amps @ 28 VDC (resistive). High current input to switch will cause permanent damage to contacts.

Wiring for DPDT Relay

For Type 1510 Level Switches equipped with DPDT relays, a wiring schematic and pin position schematic is shown below. When the 1510 is actuated, the coil will energize and “make” both NO1 and NO2 while it will “break” NC1 and NC2. This provides a DPDT circuit.



Troubleshooting

Symptom	Probable Cause
Float in actuated position but no output signal.	<ul style="list-style-type: none"> ■ No power supply. ■ Switch damaged. (Replace.)
Float in de-actuated position but still receiving an output signal.	<ul style="list-style-type: none"> ■ Switch damaged. (Replace.)
Control will not function when installed but operates when removed from process connection.	<ul style="list-style-type: none"> ■ Inadequate float travel. Float travel restricted by mounting nozzle. See Mounting Requirements.
Liquid in vessel at the actuation level but unit does not respond.	<ul style="list-style-type: none"> ■ Leaky or collapsed float. (Replace.) ■ Liquid specific gravity too low. ■ Float stem bound up or dirty. (Clean.)

Replacement Parts

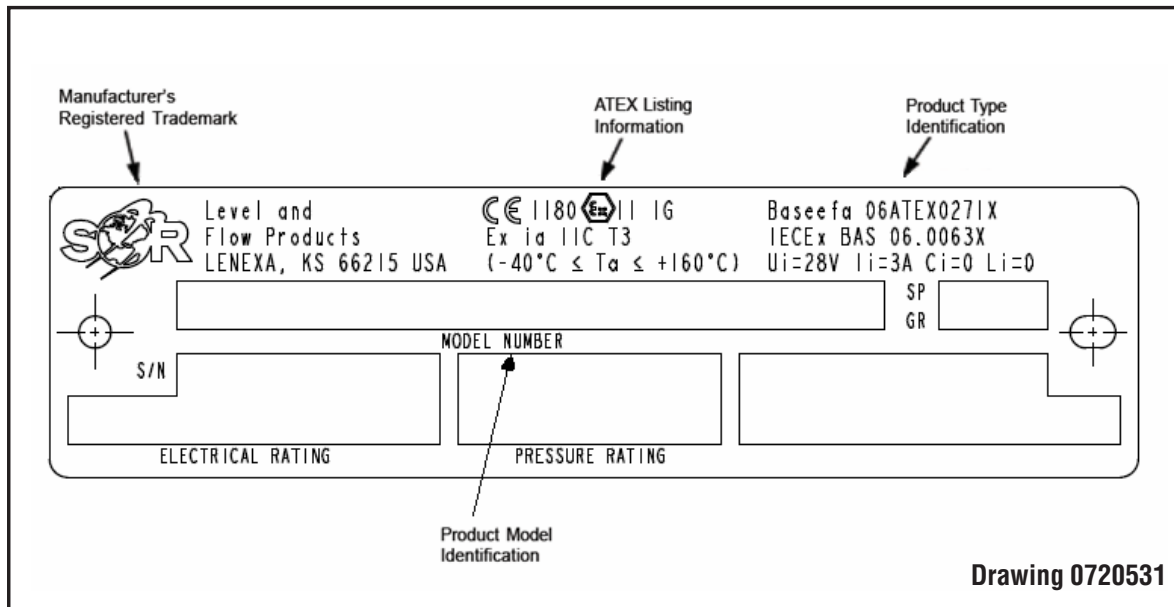
Part Number	Probable Cause
3130-091	SPST Hermetically Sealed Reed Switch Capsule
3130-242	SPDT Hermetically Sealed Reed Switch Capsule
3130-106	SPST Hermetically Sealed Reed Switch Capsule for CSA or ATEX/IECEX Certified units
3130-243	SPDT Hermetically Sealed Reed Switch Capsule for CSA or ATEX/IECEX Certified units
3130-052	316SS Float Assembly

Special Conditions for Safe Use

The permanently attached leads must be suitably protected against mechanical damage and terminated in a suitable junction or terminal facility with a minimum degree of protection of at least IP20.0

ATEX and IECEx Marking Details




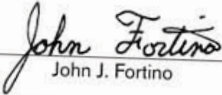
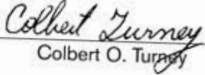

For ATEX and IECEx Certified Models



Standards Assessed To: ATEX Certification: EN 60079-0: 2004 & EN 50020: 2002
IECEx Certification: IEC 60079-0:2004 & IEC 60079-11: 1999

Declaration of Conformity

For ATEX Certified Models

	<h2>EC Declaration of Conformity</h2> 
Product	Type 1500 Electric Switches
Manufacturer	SOR Inc. 14685 West 105 th Street Lenexa, Kansas 66215-5964 United States of America
Date of Issue	August 15, 2007
We declare that the above products conform to the following specifications and directives	ATEX Directive (94/9/EC) Equipment Intended for use in Potentially Explosive Atmospheres EN 50020:2002 EN 60079-0:2004
Carries the marking	 II 1 G Ex ia IIC T3 (-40°C ≤ Ta ≤ +160°C) IECEX BAS06.0063X Ex ia IIC T3 (-40°C ≤ Ta ≤ +160°C)
Reference document	EC-Type Examination Certificate Baseefa06ATEX0271X Issued January 12, 2007
ATEX Notified Body	Baseefa (2001) Ltd. (Notified Body No. 1180) Rockhead Business Park, Staden Lane, Buxton, Derbyshire SK17 9RZ United Kingdom Baseefa Customer Reference No. 1021
Persons responsible	John J. Fortino (VP of Engineering) Colbert O. Turney (VP of Quality Assurance)
 John J. Fortino	 Colbert O. Turney
WE DELIVER QUALITY ON TIME	
	14685 West 105th Street, Lenexa, KS 66215-5964 913-888-2630 • 800-676-6794 USA • 913-888-0767 FAX
Process Instrumentation LEVEL PRESSURE FLOW TEMPERATURE	
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14685 West 105th Street, Lenexa, KS 66215 ■ 913-888-2630 ■ 800-676-6794 USA ■ Fax 913-888-0767

8/8 Registered Quality System to ISO 9001:2000

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